Yeager Airport Emergency Response Debrief

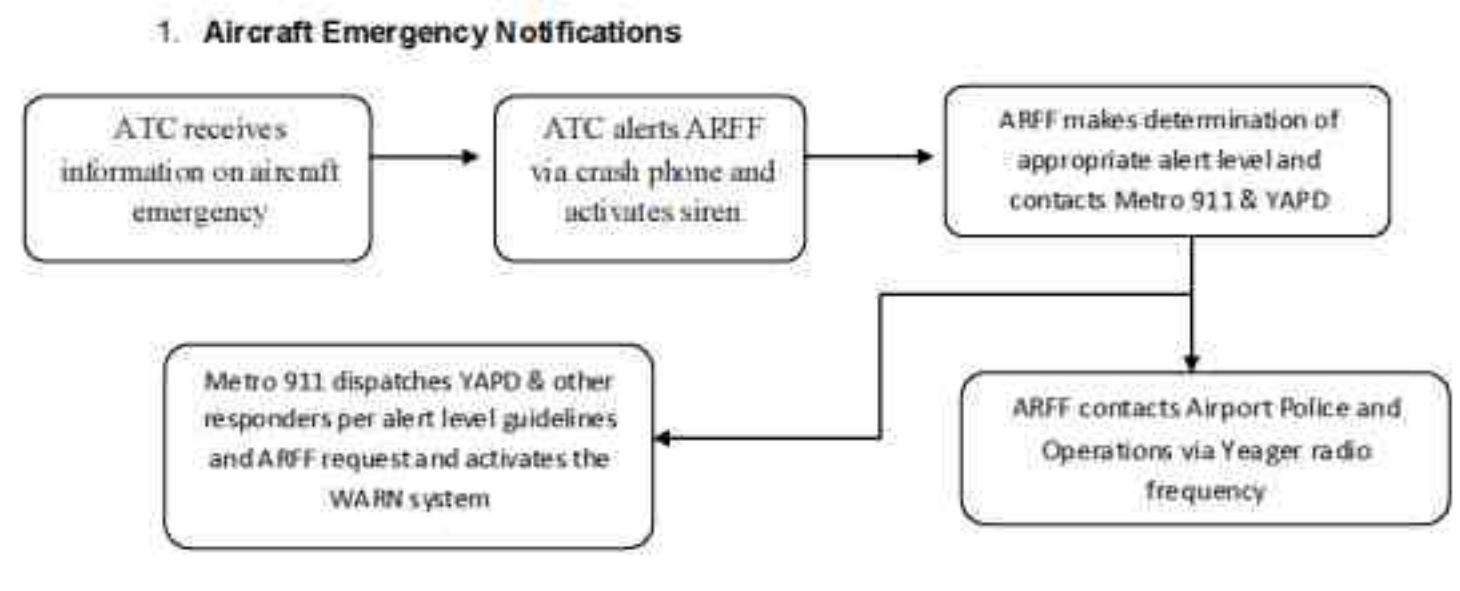
Southwest Flight 2294

Summary

- Introduction
- Notification Process
- Alert Level Definitions
- Predetermined Responses
- Aircraft Rescue & Firefighting (ARFF) Regulations
- Suggested Improvements
- Question & Answer

Yeager Airport Emergency Alert Levels	
Alert Level	**Definition**
1	(Local Standby): An aircraft that is known or suspected to have an operational defect that should not normally cause serious difficulty in achieving a safe landing. This is notification only; no response is required unless dispatched by Metro 911. This may also include in-flight medical emergencies which require an ambulance to respond.
2	(Full Emergency): An aircraft that is known or is suspected to have an operation defect that affects normal flight operations to the extent that there is danger of an accident. An accident or incident is imminent. EOC participants are noticed to standby.
3	(Aircraft Accident): An aircraft incident/accident has occurred on or in the vicinity of Yeager Airport. All emergency response units proceed to the scene or EOC participants report to the EOC at Metro 911.

Aircraft Emergency Notifications


1. Aircraft Emergency Notifications
ATC receives information on aircraft emergency
ATC alerts ARFF via crash phone and activates siren
ARFF makes determination of appropriate alert level and contacts Metro 911 & YAPD
ARFF contacts Airport Police and Operations via Yeager radio frequency
Metro 911 dispatches YAPD & other responders per alert level guidelines and ARFF request and activates the WARN system

Federal Aviation Regulation
139 Fire Department Requirements

Index Determination Definitions FAR PART 139.319

- Length of the Commercial Aircraft
- Daily Departures – (139.319 (c)) Five or More average determines Index Level.

(Regional Jets = CRJ 87 ft. in length.)

- Index A = less than 90 Feet.
- Index B = 90 Feet but less than 126 Feet.
- Index C = 126 Feet but less than 159 Feet.
- Index D = 159 but less than 200 Feet.
- Index E = 200 Feet and above.

Index Equipment Requirements FAR PART 139.217(a) Index A

- One Vehicle
  - 500 lbs. Dry Chemical or 450 lbs. potassium-based dry chemical and water with commensurate quantity of AFFF to total 100 gallons for simultaneous dry chemical and AFFF application.

Index Equipment Requirements FAR PART 139.217(b) Index B

- One Vehicle = 500 lbs dry Chemical or 1,500 gallons of water and AFFF
- Or Two Vehicles
  - (1) 500 lbs. Dry Chemical or 450 lbs. potassium-based dry chemical and water with commensurate quantity of AFFF to total 100 gallons for simultaneous dry chemical and AFFF application.
  - (2) 1,500 Gallons of Water and AFFF total between both vehicles

Index Equipment Requirements FAR PART 139.217(c) Index C

- One Vehicle as defined in Index A and B
- Two Vehicles with a combined 3,000 gallons of water and AFFF.

Index Equipment Requirements FAR PART 139.217(d) Index D

- Three Vehicles – Combined Index A requirements and 4,000 gallons of AFFF

ARFF Operational Requirements FAR PART 139.319

- Response Requirements (139.319(h))
  - 3 minutes from time of alarm to one vehicle mid point farthest runway.
  - 4 minutes from the time of the alarm all Index Vehicles present.
  - At least one trained EMT present.

ARFF Equipment

- 1500 Gallons Water
- 500 Pounds Dry Chemical
- 210 Gallon AFFF

ARFF Equipment

- 3,300 Gallons Water
- 500 Pounds Dry Chemical
- 500 Gallon AFFF

Alert Two Timeline
Southwest Airlines Flight 2294
July 13, 2009

- 1754 – Federal Aviation Administration Indianapolis Center notifies Charleston Tower
- 1756 – Charleston Tower makes radio contact with Southwest Flight 2294
- 1758 – Charleston Tower notifies 130th Airlift Wing Fire Department (Station 27)
- 1801 – Station 27 responding to Runway 5 for a 737 with pressurization problem, 128 souls on board, declares Alert II
- 1803 – Metro 911 advises Pinch VFD Station 2 to standby in station
- 1803 – Metro 911 dispatches CFD Medic 431 and CFD Medic Supervisor 408
- 1803 – Metro 911 advises all CFD units of an Alert II at Yeager Airport
- 1803 – Station 27 advises Metro that they are assuming Yeager command, the aircraft is 10 miles out, 5 minutes away, there is a hole in the left side of the fuselage, and no reported injuries.
- 1804 – CFD Medic 431 enroute
- 1804 – Metro 911 dispatches CFD Shift Commander 450, Engine 454, and Rescue 481 to airfield emergency gate
- 1805 – CFD Shift Commander 450 enroute
- 1806 – CFD Fire Safety Officer 420 enroute
- 1807 – Southwest Airlines Flight 2294 lands safely on Runway 5

Responding Units

130th Airlift Wing Fire Department
Rescue
3 Aircraft Crash Trucks
Shift Commander

Charleston Police Department – 3 units

Yeager Airport Police – 2 units

Charleston Fire Department
Medic 431
Medic 436
Medic Supervisor 408
Fire Safety Officer 420
Shift Commander 450
Rescue 481
Engine 454

Pinch Volunteer Fire Department
Engine, Rescue, & Supervisor standby in station

KRT – 2 buses

	Aircraft Emergencies (Activated by 130th AW Fire Dept.)		
Agency	**Alert 1**	**Alert 2**	**Alert 3**
	In-flight Medical or Mechanical		**Crash**
130th AW Fire	1st Due	1st Due	1st Due
130th AW Police	Respond with 130th Fire	Respond with 130th Fire	Respond with 130th Fire, block Coonskin Rd & Airport Rd, set up initial crash site security
Yeager Police	Respond to emergency gate	Respond to emergency gate	Respond to crash site, coordinate checkpoint set up
Other Law Enforcement	NA	2 units to emergency gate, 1 unit standby at Greenbrier & Airport Rd	All available units to set up checkpoints (See checkpoint map)
Chas. Fire	NA	Supr, Rescue, Engine, to emergency gate	Supr, Rescue, Engine, 1-Amb to emergency gate
Ambulance	1 Ambulance to emergency gate	2-Ambulances, additional assets as requested by “IC”	3 Ambulances, additional assets as requested by “IC”
Pinch VFD	NA	Standby at station for possible response/move-up	Rescue, 1 Engine to site or staging at “IC” request
Mobile Command	NA	Standby at Metro Requested by “IC”	Respond to incident command post
TSA	NA	NA	Close checkpoint, evacuate Sterile Area
Additional Assets	NA	1 KRT bus to emergency gate	Requested by “IC” report to 130th AW FD staging

Improvements

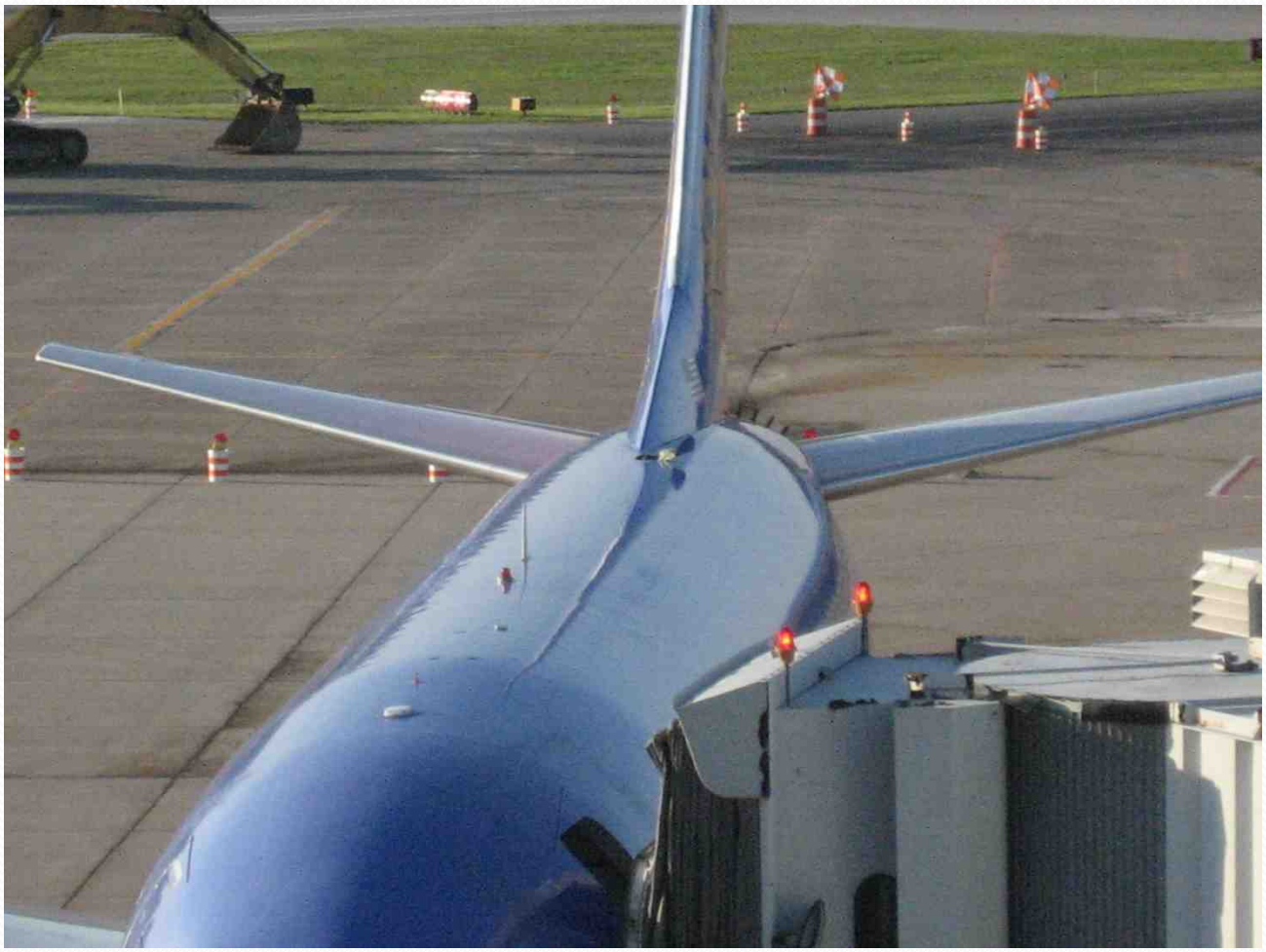
- **Small - <15 passengers/ <100 gallons fuel**
- **Medium - 16-30 passengers/ 101-1000 gallons fuel**
- **Large - >30 passengers/ >1000 gallons fuel**

FAA & ICAO Guidance

Aircraft Occupants	*Number of casualties*	*20 % casualties Immediate Care Priority I*	*30 % casualties Delayed Care Priority II*	*50 % casualties Minor Care Priority III*
500	375	75	113	187
450	338	68	101	169
400	300	60	90	150
350	263	53	79	131
300	225	45	68	112
250	188	38	56	94
200	150	30	45	75
150	113	23	34	56
100	75	15	23	37
50	38	8	11	19

These figures are based on the assumption that the maximum number of surviving casualties at an aircraft accident occurring on or in the vicinity of the airport is estimated to be about 75 % of the aircraft occupants.
Source: ICAO Airport Services Manual, Part 7, Airport Emergency Planning, Section 3, Airport Medical Services

Aircraft Emergency Predetermined Responses

	Alert 1	Alert 2			Alert 3		
	In-flight mechanical or medical	Small	Medium	Large	Small	Medium	Large
130th AW Fire	Advise Metro of Alert & Code	Advise Metro of Alert & Code	Advise Metro of Alert & Code	Advise Metro of Alert & Code	Advise Metro of Alert & Code	Advise Metro of Alert & Code	Advise Metro of Alert & Code
YAPD	Respond to emergency gate	Respond to emergency gate	Respond to emergency gate	Respond to emergency gate	Respond to crash site, coordinate checkpoint set-up	Respond to crash site, coordinate checkpoint set-up	Respond to crash site, coordinate checkpoint set-up
Charleston Police	-	-	2 units to emergency gate, 1 unit stage at Fibernet	2 units to emergency gate, 1 unit stage at Fibernet	2 units to crash site	All available units to set up checkpoints (See Map)	All available units to set up checkpoints (See Map)
Kanawha County Sheriff	-	-	-	1 unit to emergency gate, 1 unit stage at Coonskin Dr & 114, SWAT	2 units to crash site	All available units to set up checkpoints (See Map)	All available units to set up checkpoints (See Map), SWAT
Charleston Fire	1 Amb to emergency gate if medical	1 Amb to emergency gate	Supr, Rescue, Engine, 3 Amb to emergency gate	Supr, Rescue, 2 Engines, Ladder, 4 Amb to emergency gate, Mass casuality trailer, all stations on standby	Supr, Rescue, All available Amb	Supr, Rescue, Engine, 3 Amb	Supr, Rescue, 2 Engines, Ladder, 4 Amb, Mass casuality unit
KCEAA	-	2 Amb	6 Amb to emergency gate, 2 Amb stage at KCEAA	10 Amb to emergency gate, 6 Amb stage at KCEAA, Mass casuality trailer	5 Amb	All available Amb	All available Amb, Mass casuality unit
Pinch VFD	-	Standby at station	Standby at station	Standby at station	1 Eng, 1 Rescue to ANG base staging	1 Eng, 1 Rescue to ANG base staging	1 Eng, 1 Rescue to ANG base staging
Mobile Command	-	Standby at Metro	Respond to emergency gate	Respond to emergency gate	Respond to Incident Command Post	Respond to Incident Command Post	Respond to Incident Command Post
KRT	-	-	1 bus to emergency gate	3 buses to emergency gate	-	2 buses to ANG base staging	3 buses to ANG base staging

Questions?